



DEPARTMENT OF ENERGY
 ATMOSPHERIC SCIENCE PROGRAM
 FY 2007 SCIENCE TEAM MEETING
 Boulder CO, October 25-27, 2006
 NUGGET AND POSTER
 PRESENTATIONS



NUGGET PRESENTATIONS

LABORATORY STUDIES

Secondary Organic Aerosol Formation Through Unique Nitrate Photochemistry

B. J. Finlayson-Pitts

HYGROSCOPICITY AND CCNs

Laboratory Studies of Processing of Carbonaceous Aerosols by Atmospheric Oxidants

Paul Ziemann, Roger Atkinson, Janet Arey, Aiko Matsunaga, Yong Lim, Sonia Kreidenweis, Paul DeMott, Markus Petters, and Anthony Prenni

Factors Affecting CCN Activity of Soot Aerosols

E. S. Cross, J. G. Slowik, P. Davidovits, T. B. Onasch, J. T. Jayne, and D. R. Worsnop

Size vs. Chemistry for CCN

J. Hudson

Investigation of Hygroscopicity and Cloud-and-Ice Nucleating Activities of Combustion Aerosols

Sonia Kreidenweis, Paul DeMott, Markus Petters, Anthony Prenni, Kip Carrico, Kirsten Koehler, John Volckens, Maren Bennett, Rudy Stanglmaier, and Olga Popovicheva

OPTICS

Woodsmoke Optics Measurements

W. P. Arnott

Aerosol Refractive Index Retrieval Using A 21 Channel Dual Polarization Polar Nephelometer

B. Barkey

Anthropogenic Black Carbon And Organic Carbon Particulate Matter Present A Large Uncertainty In The Estimation Of Future Climate

A. Chung, B. Barkey, and S. E. Paulson

MODELING

EAKF-CMAQ: Development and Initial Evaluation of an Ensemble Adjustment Kalman Filter Based Data Assimilation

V. R. Kotamarthi, A. Zubrow, L. Chen, and M. Stein

Sensitivity of Concentration of Accumulation-mode Aerosol Particles to the Representation of New Particle Formation and Particle Emissions in Chemical Transport Models

Lim-Seok Chang, Douglas L. Wright, Ernie R. Lewis, Robert McGraw, and Stephen E. Schwartz

FIELD STUDIES

Nighttime Lagrangian Measurements of Aerosols and Oxidants

Rahul A. Zaveri, Carl M. Berkowitz, John M. Hubbe, Sasha Madronich, Joel Thornton, Stephen R. Springston, Fred J. Brechtel, Timothy B. Onasch, John T. Jayne, and Douglas R. Worsnop

MASE

Aerosol Indirect Effects Observed During MASE

P. Daum

Aerosol Chemical Composition and CCN Properties During 2005 MASE

Y.-N. Lee

Partitioning of Methanesulfonate and Non-Sea-Salt Sulfate in Individual Sea Salt Particles Collected at the Pt. Reyes National Seashore

Y. Desyaterik, A. Laskin, R. J. Hopkins, A. V. Tivanski, and M. K. Gilles

Effects Of Aerosol Size Distribution And Chemical Composition Variation On Aerosol First Indirect Forcing

J. Wang

Aerosol Processing In Coastal Stratocumulus Clouds: Observational Evidence And Modeling Results

Mikhail Ovtchinnikov and Richard Easter

MAX-MEX

Brief Overview of MAX-Mex

Jeff Gaffney

The Use of Anthropogenic, Biomass Burning, and Volcanic Emission Estimates for Modeling Particulates Downwind of Mexico City

Jerome Fast and Christine Wiedenmyer

Airborne High Spectral Resolution Lidar Observations of Aerosol Spatial Distribution and Optical Properties from MAX-MEX

Rich Ferrare, John Hair, Chris Hostetler, Anthony Cook, and David Harper

Observations of elemental carbon specific absorption at the T1 and T2 sites during the Max-Mex field campaign

J. C. Doran, J. C. Barnard, J. D. Fast, E. I. Kassianov, N. S. Laulainen, M. S. Pekour, W. J. Shaw, X-Y Yu, W. P. Arnott, L. Paredes-Miranda, R. Coulter, T. Martin, L. Kleinman, S. R. Springston, R. Cary, and D. F. Smith

Aerosol Optics During Max-Mex

W. Patrick Arnott and Lupita Paredes

<i>Observations Regarding New Particle Formation in Mexico City</i>
Kenjiro Iida, Mark Emery, Mark Stolzenburg, and Peter H. McMurry
<i>The Chemical Composition of Particles Formed by Nucleation in Tecamac, Mexico During MILAGRO</i>
Jim Smith and Pete McMurry
<i>Secondary Organic Aerosol Formation From Anthropogenic Air Pollution</i>
R. Volkamer, J. L. Jimenez, F. San Martini, K. Dzepina, Q. Zhang, D. Salcedo, D. R. Worsnop, M. J. Molina, and L. T. Molina
<i>Thermodenuder-Aerosol Mass Spectrometer System to Characterize the Aerosol Chemically-Resolved Volatility: Results from Mexico City</i>
J. Alex Huffman, Jose-Luis Jimenez, Paul J. Ziemann, John T. Jayne, Timothy Onasch, and Doug R. Worsnop
<i>SOA Production and Light Absorption as a Function of Photochemical Age</i>
Larry Kleinman, Stephen Springston, Gunnar Senum, Yin-Nan Lee, Jian Wang, Linda Bowerman, Peter Daum, Judy Weinstein-Lloyd, John Hubbe, Mike Ortega, Liz Alexander, John Jayne, and Manjula Canagaratna
<i>Variation of Aerosol Size Distribution and CCN Spectrum at Urban Site During MILAGRO</i>
J. Wang
<i>Absorbing aerosol measurements in a Megacity, in Polluted Clouds and from Biomass Burning: Constraining their climate forcing</i>
Claudio Mazzoleni, Manvendra Dubey, Petr Chylek, Pat Arnott, Lupita Paredes, Timothy Onasch, and John Seinfeld
MAX-TEX
<i>Overviewn</i>
Carl Berkowitz , Xiao-Ying Yu, Liz Alexander, John Ortega, Tom Jobson
<i>First Look at the Airborne High Spectral Resolution Lidar Observations From the TexAQS II Campaign</i>
Chris Hostetler
<i>A First Look at Aerosol Observations from The Houston Triangle</i>
M. Liz Alexander et al.
<i>A First Look at PTR-MS observations and aerosol data from the Aldine site of The Houston Triangle</i>
Xiao-Ying Yu et al.

POSTERS

FIELD
<i>Volatility, Size, and Vertical Distribution of CCN in MASE</i> Jim Hudson
<i>Aerosol Processing In Coastal Stratocumulus Clouds: Observational Evidence And Modeling Results</i> Mikhail Ovtchinnikov and Richard Easter
<i>The Influence of Fog on Aerosol Optical Properties</i> E. Andrews, P. Sheridan, A. Jefferson, A. McComiskey, and J. Ogren
<i>Partitioning of Methanesulfonate and non-Sea-Salt Sulfate in Individual Sea Salt Particles Collected at the Pt. Reyes National Seashore</i> Y. Desyaterik, A. Laskin, R. J. Hopkins, A. V. Tivanski, and M. K. Gilles
<i>Tar Balls: Size-Dependent Chemical Composition of Individual Organic Aerosol Particles Studied with Scanning Transmission X-ray Microscopy</i> Alexei V. Tivanski, Rebecca J. Hopkins, and Mary K. Gilles
<i>Carbonaceous Aerosol Processing in the Mexico City Metropolitan Area</i> T. B. Onasch, J. G. Slowik, P. Davidovits, S. Herndon, E. Wood, D. R. Worsnop, C. E. Kolb, W. B. Knighton, M. Zavala, D. Thornhill, L. Marr, W. P. Arnott, C. Mazzoleni, M. K. Dubey, R. J. Hopkins, M. K. Gilles, Y. Desyaterik, and A. Laskin
<i>Variation Of Aerosol Size Distribution And CCN Spectrum At Urban Site During MILAGRO</i> Jian Wang
<i>Microscopy And Microprobe Studies Of Individual Particles Collected During MILAGRO 2006 Study</i> K. S. Johnson, R. Gonzalez, L. T. Molina, R. J. Hopkins, A. V. Tivanski, M. K. Gilles, Y. Desyaterik, and A. Laskin
<i>The MAX-MEX T1-T2 Component of the MILAGRO Campaign</i> J.C. Doran, J.C. Barnard, J.D. Fast, E.I. Kassianov, N.S. Laulainen, M.S. Pekour, W.J. Shaw, X-Y Yu, W.P. Arnott, L. Paredes-Miranda, R. Coulter, T. Martin, L. Kleinman, S. R. Springston, R. Cary, and D. F. Smith
<i>Assessing The Oxidative Capacity Of The Atmosphere: MCMA-2003 as a Case Study</i> Philip Sheehy, Rainer Volkamer, Erik Velasco, Luisa T. Molina, M. Lizabeth Alexander, Tom Jobson, Brian Lamb, Deepali Vimal, Sebastien Dusanter, Philip Stevens, and William H. Brune
<i>MAX-DOAS Measurements during MCMA-2006</i> R. Sinreich, T. Wagner, S. Beirle, U. Platt, L.T. Molina, and R. Volkamer
<i>Gas and Particle Measurements during MILAGRO-2006 using the ARI Mobile Laboratory</i> Miguel Zavala, Scott Herndon, Ezra Wood, Timothy Onasch, Charles Kolb, Berk Knighton, Claudio Mazzoleni, Mavendra Dubey, Dwight Thornhill, Linsey Marr and Luisa T. Molina

Evidence Of Long-Range Transport Of Mexico City Outflow Based On CMET Balloon Trajectories During The MILAGRO 2006 Campaign

Paul Voss, Rahul A. Zaveri, Tom Hartley, Pamela DeAmicis, Indira Deonandan, Oscar M. Antonio, Gaston C. Jiménez, David Greenberg, and Maurico Estrada

Obtaining the Diameter Growth Rate and Particle Current during Nucleation and Growth Periods from Measurements of Charge Distributions and Aerosol Size Distributions

Kenjiro Iida, Mark Stolzenburg, and Peter H. McMurry

The Chemical Composition Of Particles Formed By Nucleation In Tecamac, Mexico During MILAGRO

Jim Smith

Thermodenuder-Aerosol Mass Spectrometer System to Characterize the Aerosol Chemically-Resolved Volatility: Results from Mexico City

J. Alex Huffman, Jose-Luis Jimenez, Paul J. Ziemann, John T. Jayne, Timothy Onasch, and Doug R. Worsnop

Organic Aerosol Analysis with the Aerodyne HR-ToF-AMS in Mexico City during MILAGRO/MAX-MEX

Allison Aiken, Dara Salcedo, J. Alex Huffman, Michael Cubison, Ken Docherty, Ingrid Ulbrich, Jose L. Jimenez, Douglas R. Worsnop

Aerosol Optical Properties in Mexico City 2003 and 2006

Nancy A. Marley and Jeffrey S. Gaffney

Natural Radioactivity Measurements in Fine Aerosols

Jeffrey S. Gaffney and Nancy A. Marley

Airborne High Spectral Resolution Lidar Observations of Aerosol Spatial Distribution and Optical Properties from MILAGRO

John Hair, Rich Ferrare, Chris Hostetler, David Harper, and Anthony Cook

Absorbing aerosol measurements in a Megacity, in Polluted Clouds and from Biomass Burning: Constraining their climate forcing

Claudio Mazzoleni, Manvendra Dubey, Petr Chylek, Pat Arnott, Lupita Paredes, Timothy Onasch, and John Seinfeld

Megacity Radiative Forcing: A Mexico City Case Study

Manvendra K. Dubey, Seth Olsen, Petr Chylek, Claudio Mazzoleni, Yongxin Zhang, James T. Randerson, Larry Horowitz, Lupita Paredes, and Pat Arnott

Nighttime Lagrangian Measurements of Aerosols and Oxidants

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MODELING

Proposed Aerosol Treatment for CAM4

Steven Ghan

Aerosol Properties and Processes: A Path from Field and Laboratory Measurements to Global Climate Models

Steven Ghan and Stephen E. Schwartz

The Evolution Of Particulates And Aerosol Radiative Forcing Over Mexico Using The WRF-Chem Fully-Coupled Meteorology-Chemistry-Aerosol Model

J. D. Fast, J. C. Doran, J. C. Barnard, R. A. Zaveri, L. Kleinman, S. Springston, and C. Wiedenmyer

Sensitivity of Concentration of Accumulation-Mode Aerosol Particles to the Representation of New Particle Formation and Particle Emissions in Chemical Transport Models

Lim-Seok Chang, Douglas L. Wright, Ernie R. Lewis, Robert McGraw, and Stephen E. Schwartz

Heat Capacity, Time Constant, and Sensitivity of Earth's Climate System

Stephen E. Schwartz

An Introduction to the GISS-MATRIX Microphysical Aerosol Model

Susanne Bauer, Douglas Wright, Dorothy Koch, Surabi Menon, Bob McGraw

LABORATORY/INSTRUMENTATION

Aerosol Particle Density Determination Using Light Scattering in Conjunction With Mass Spectrometry

E. S. Cross, J. G. Slowik, P. Davidovits, J. D. Allan, T. B. Onasch, J. T. Jayne, D. K. Lewis, M. Canagranata, and D. R. Worsnop

What is Atmospheric Black Carbon? Chemical Bonding and Structural Information on Black Carbon Reference Materials and Atmospheric Aerosols

Rebecca J. Hopkins, Alexei V. Tivanski, Bryan D. Marten, and Mary K. Gilles

Anthropogenic Black Carbon And Organic Carbon Particulate Matter Present A Large Uncertainty In The Estimation Of Future Climate

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Secondary Organic Aerosol Formation Through Unique Nitrate Photochemistry

B. J. Finlayson-Pitts

Direct Aerosol Absorption Measurements using Photothermal Interferometry

Arthur J. Sedlacek III and Jeonghoon Lee

G-1 Configurations

John Hubbe